

# The Liberation of the Feet: Computer Enhanced Footwear for Theatrical Audiovisual Expression

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# Certificate of original authorship

I certify that the work in this thesis has not previously been submitted for a degree nor has it been submitted as part of requirements for a degree except as fully acknowledged within the text.

I also certify that the thesis has been written by me. Any help that I have received in my research work and the preparation of the thesis itself has been acknowledged. In addition, I certify that all information sources and literature used are indicated in the thesis.

Alexandra Murray-Leslie

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I dedicate this thesis to my mother and husband

# Abstract

Building upon my established history as a performance artist and pop musician, this research investigates new ways of costuming the foot for theatrical audiovisual expression as a ‘gesamtkunstwerk’—an all-embracing artwork that adopts and makes use of many artforms and disciplines.

Through the development of a series of *Computer Enhanced Footwear (CEF)* prototypes, this research demonstrates how this gesamtkunstwerk came together through the intersection of fashionable costume design, pop music, dance choreography, lens-based work, scenography, kinesiology, sound and lighting system design and 3D fabrication practices. Resulting in a unified body of work, grounded by the notion that shoes and feet are more than simply tools to help carry our bodies around. They can be reimagined through the act of performance and the application of audiovisual technology to make a statement, semantically communicate social-political concerns and facilitate free, spontaneous expression.

Explorations of philosophical concepts around the feet and footwear from anthropology, natural science and medical literature are featured in this research, along with examples and descriptions of foot-based designs related to prosthetics, fashion, pop music, and performance art to illustrate the vast potentials for the feet as instruments, costumes and more.

Detailed portrayals of my personal art method are presented to showcase my cross-disciplinary, reflexive and experimental practice-based approach, which occurred within varied contexts and settings, including fabrication workshops, sports science laboratories, pole dance studios, music festival stages, fashion catwalks and art museum events. As well as illustrate how these divergent practices converged during the research, to create the *CEF* prototypes and shape their materials, functions and aesthetics, in an effort to liberate the feet when in the air, on the ground or submerged in water.

Analysis and self-reflections of the researcher’s role as performer and fabricator are provided together with video and photographic documentation to help demonstrate the outcomes and processes of the various *CEF* projects. This includes recounting the insights

which directed theoretical, physical and metaphysical development of past and future *CEF* iterations, as well present a framework outlining the different aspects to consider when prototyping instruments such as *CEF*.

This research also documents more than two hundred performative situations that developed out of the process of developing and testing the *CEF*. These include live solo performances, group performances with my music band Chicks on Speed, as well as studio workshops and performances with collaborating musicians, scientists, pole dancers, choreographers and performance artists. As well as other unexpected outcomes and future project directions that organically evolved out of the research—all of which culminate to guide, influence and form this research gesamtkunstwerk.



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